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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/341,635      | 07/14/1999  | RUI B. FERREIRA      | DEXNON/087/P        | 5372             |

7590 04/17/2003

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|                             |              |
|-----------------------------|--------------|
| EXAMINER                    |              |
| TORRES VELAZQUEZ, NORCA LIZ |              |
| ART UNIT                    | PAPER NUMBER |

1771

DATE MAILED: 04/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

|  |                                       |   |  |
|--|---------------------------------------|---|--|
| <b>Office Action Summary</b>   | Application N .                       | Applicant(s)  |  |
|  | 09/341,635                            | FERREIRA ET AL.   |  |
|  | Examiner<br>Norca L. Torres-Velazquez | Art Unit<br>1771  |  |
| <i>-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --</i>   |                                       |   |  |
| <b>Period for Reply</b>  |                                       |   |  |
| <b>A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.</b>   |                                       |   |  |
| <ul style="list-style-type: none"> <li>- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.</li> <li>- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.</li> <li>- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.</li> <li>- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).</li> <li>- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).</li> </ul> |                                       |   |  |
| <b>Status</b>  |                                       |   |  |
| 1) <input checked="" type="checkbox"/> Responsive to communication(s) filed on <u>03 February 2003</u> .   |                                       |   |  |
| 2a) <input type="checkbox"/> This action is <b>FINAL</b> .                            2b) <input checked="" type="checkbox"/> This action is non-final.  |                                       |   |  |
| 3) <input type="checkbox"/> Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under <i>Ex parte Quayle</i> , 1935 C.D. 11, 453 O.G. 213.  |                                       |   |  |
| <b>Disposition of Claims</b>   |                                       |   |  |
| 4) <input checked="" type="checkbox"/> Claim(s) <u>2-23</u> is/are pending in the application.   |                                       |   |  |
| 4a) Of the above claim(s) <u>18-22</u> is/are withdrawn from consideration.  |                                       |   |  |
| 5) <input checked="" type="checkbox"/> Claim(s) <u>11-17</u> is/are allowed.   |                                       |   |  |
| 6) <input checked="" type="checkbox"/> Claim(s) <u>2-10,23</u> is/are rejected.  |                                       |   |  |
| 7) <input type="checkbox"/> Claim(s) _____ is/are objected to.   |                                       |   |  |
| 8) <input type="checkbox"/> Claim(s) _____ are subject to restriction and/or election requirement.   |                                       |   |  |
| <b>Application Papers</b>  |                                       |   |  |
| 9) <input type="checkbox"/> The specification is objected to by the Examiner.  |                                       |   |  |
| 10) <input type="checkbox"/> The drawing(s) filed on _____ is/are: a) <input type="checkbox"/> accepted or b) <input type="checkbox"/> objected to by the Examiner.  |                                       |   |  |
| Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  |                                       |   |  |
| 11) <input type="checkbox"/> The proposed drawing correction filed on _____ is: a) <input type="checkbox"/> approved b) <input type="checkbox"/> disapproved by the Examiner.  |                                       |   |  |
| If approved, corrected drawings are required in reply to this Office action.   |                                       |   |  |
| 12) <input type="checkbox"/> The oath or declaration is objected to by the Examiner.   |                                       |   |  |
| <b>Priority under 35 U.S.C. §§ 119 and 120</b>   |                                       |   |  |
| 13) <input checked="" type="checkbox"/> Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  |                                       |   |  |
| a) <input checked="" type="checkbox"/> All b) <input type="checkbox"/> Some * c) <input type="checkbox"/> None of:   |                                       |   |  |
| 1. <input checked="" type="checkbox"/> Certified copies of the priority documents have been received.  |                                       |   |  |
| 2. <input type="checkbox"/> Certified copies of the priority documents have been received in Application No. _____.  |                                       |   |  |
| 3. <input type="checkbox"/> Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).   |                                       |   |  |
| * See the attached detailed Office action for a list of the certified copies not received.   |                                       |   |  |
| 14) <input type="checkbox"/> Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  |                                       |   |  |
| a) <input type="checkbox"/> The translation of the foreign language provisional application has been received.   |                                       |   |  |
| 15) <input type="checkbox"/> Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.  |                                       |   |  |
| <b>Attachment(s)</b>   |                                       |   |  |
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   |                                       | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____. |  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   |                                       | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>19</u> .  |                                       | 6) <input type="checkbox"/> Other: _____.                                   |  |

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments with respect to claims 2-7 and 23 have been considered but are moot in view of the new ground(s) of rejection.
2. The 35 U.S.C. 112 rejection of claim 16 has been withdrawn.

### *Claim Rejections - 35 USC § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2- are rejected under 35 U.S.C. 103(a) as being unpatentable over SNYDER et al. (US 4,319,956) in view of HOLM WO 94/02674.

SNYDER et al. discloses a nonwoven web material that exhibits a cytotoxicity level of zero for use as a disposable medical towel and the like. The material includes a water laid nonwoven base web saturated with an inherently hydrophobic latex binder containing up to 2 percent by weight of a polyol surfactant. (Abstract) The fibrous base paper is produced in the form of a continuous web material in accordance with known and conventional papermaking techniques. (Column 2, lines 16-20) The fiber furnish used is a blend of fibrous materials that individually contribute to the desired end result. The blend preferably includes four different fibrous components: high alphacellulose pulps (pulp component), hemicellulose wood pulps (pulp component), hemp or hemplike vegetable fibers and synthetic fibers. (Column 3, lines 3-17) The reference teaches that some strength is imparted by the Kraft fibers (pulps), however,

additional strength and absorbency is imparted in accordance with their invention by including long vegetable fibers and particularly extremely long natural unbeaten fibers (unpulped long natural fiber bundles) such as sisal, hemp, caroa, flax, jute and Indian hemp. (Column 4, lines 13-17) The reference also teaches that synthetic fibers contribute to the wet mullen of the web and help carry the web at the wet end of the papermaking machine. Therefore, fibers such as viscose or acetate rayon are preferably included within the fiber furnish composition. (Column 3, lines 51-57)

With regards to claims 8-9 and 23, refer to Table 2 of the SNYDER et al. reference that discloses webs with basis weigh between 38 and 65 gsm.

While SNYDER et al. teaches a wet-laid nonwoven web material comprising unpulped long natural fiber bundles and a pulp fiber component, the reference also teaches the use of a binder. It is noted that while the language of independent claim 5 does not preclude the inclusion of a binder, the Examiner is providing the HOLM et al. reference that teaches the formation of a nonwoven material without the addition of a binder.

HOLM et al. discloses a nonwoven material produced by hydroentanglement of a wet-laid web. The material comprises a mixture of short plant fibres, in particular pulp fibres, and long hydrophilic plant fibres, where the major portion of the fibres presents a fibre length which is at least 10 mm. (Abstract) The long plant fibres may be constituted by all types of leaf fibres. Examples of leaf fibres are abaca. The invention implies that a fibre web comprising a mixture of pulp fibres and long hydrophilic plant fibres is wet-laid. The reference also gives the example of seed hair fibres which are present naturally in the form of elementary fibres. (Page 3, line 15 – Page 4, line 7)

The reference further discloses the use of synthetic or regenerated staple fibers, e.g. polyester, polyamide, polypropylene, rayon, or the like. (Page 1, lines 24-27) HOLM et al. further teaches that in order to achieve high material strength, a mixing-in of fibres, which are longer than the pulp fibres, is required. It is therefore common to mix in a certain proportion of synthetic or regenerated staple fibres. (Page 2, lines 1-5) According to WO 91/08333, hydrophobic plant fibres can be wet-laid and bound by means of hydroentanglement, resulting in a hydrophilic nonwoven material. In this case the hydrophobic fibres maintain a large part of their bending stiffness during the wet-laying process, which allows a comparatively uniform fibre formation. (Page 2, lines 24-29) The reference further discloses that after hydroentanglement, the material is pressed. (Page 5, lines 1-3).

With regards to claim 4, the HOLM et al. reference teaches that the main component of the fibers present a fiber length of at least 10 mm. (Page 3, lines 2-4)

With regards to claim 10, it is noted that the prior art is found to disclose each chemical and structural feature instantly claimed, therefore it must meet the property requirement specified, otherwise, applicant's claim is incomplete. Note ex parte SLOB (157 USPQ 172) which supports this position.

Since both SNYDER et al. and HOLM et al. are from the same field of endeavor, the purpose disclosed by HOLM et al. would have been recognized in the pertinent art of SNYDER et al.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the nonwoven web and provide it with a process of making it

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that does not require the addition of a binder with the motivation of producing a material that exhibits a cytotoxicity level of zero as disclosed by SNYDER et al. (Abstract)

***Allowable Subject Matter***

5. Claims 11-17 are allowed.
6. The following is a statement of reasons for the indication of allowable subject matter: the prior art of record fails to teach a multi-layer sheet material particularly comprising the claimed nonwoven web with a pulp web secured to it.
7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Norca L. Torres-Velazquez whose telephone number is 703-306-5714. The examiner can normally be reached on Monday-Thursday 8:30-3:00 pm and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 703-308-2414. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

nlt  
April 14, 2003

*Elizabeth M. Cole*  
ELIZABETH M. COLE  
PRIMARY EXAMINER